

TWO NEW BITING LICE (MALLOPHAGA : PHILOPTERIDAE)  
FROM BIRDS OF THE UNITED STATES.By HAROLD S. PETERS.<sup>1</sup>*Philopterus migratorii*, n. sp.

A new species easily recognized as distinct from *Philopterus subflavescens*, commonly found on many passerine birds, by the elongate and narrow forehead with the distinct clypeal signature, and by the male genitalia. Found on the eastern robin, *Turdus migratorius migratorius* L., from the eastern part of the United States.

MALE.—*Head* rather elongate, with distinct clypeal signature, as shown in figure 1. Front of head slightly concave, colorless, with a short seta at each side. Trabeculae colorless, acute, and slightly longer than the first antennal segment. Eye clear, protruding, with a short dorsal spine. Temples rounding, with a long seta and 3 bristles between this seta and the eye. Posterior edge of head almost straight, with no setae. Antennae reaching, if extended backwards, almost to the long seta on the temple. Second segment longest, first and fifth about equal in length, third and fourth equal but slightly shorter than first or fifth.

*Thorax*.—Prothorax rectangular, a long seta near each latero-posterior rounded angle. Pterothorax nearly three-fourths as wide as head, sides sharply diverging posteriorly. A series of about 18 setae arranged along the posterior border, which is angulated on the abdomen. Legs of moderate size.

*Abdomen* of 9 segments, rather elongate oval in shape, widest at fourth segment, which is slightly wider than the head. Segments 1 to 6 with a row of 6 rather long setae across the center of the posterior border of each segment. Segment 3 with one long seta and segments 4, 5 and 6 with one long and one short seta on each side of the posterior border almost below the spiracle. Segments 3 to 7 with several setae in latero-posterior angles. Ninth segment with a series of 12 medium-length setae near the rounded posterior margin. Genitalia very distinctive, as in figure 2, and occupying parts of segments 6 to 9. Spiracles on segments 2 to 7. Pleurites of segments 2 to 6 extending forward into the preceding segment. Coloration: Light golden brown with darker brown borders and markings.

FEMALE.—Similar to the male but somewhat larger. Antennae the same in the two sexes. Abdomen more elongate than in the male, with ninth segment slightly bilobed and bare of setae. Posterior border of eighth segment with 4 long and 4 short setae dorsally.

## AVERAGE MEASUREMENTS IN MM.

	Male		Female	
	Length	Width	Length	Width
Head.....	0.48	0.45	0.51	0.49
Thorax.....	.26	.41	.30	.44
Abdomen.....	.75	.64	.99	.68
Total.....	1.49		1.80	

<sup>1</sup>Contribution from the Division of Insects Affecting Man and Animals, Bureau of Entomology and Plant Quarantine, United States Department of Agriculture, Washington, D. C.

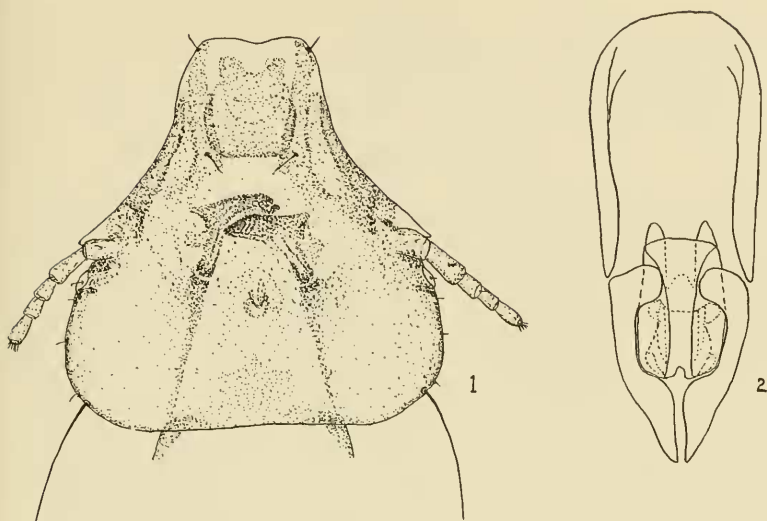


Fig. 1. *Philopterus migratorii*, head of male, dorsal aspect  $\times 100$

Fig. 2. Same, male genitalia, dorsal aspect  $\times 200$ .

*Type host*.—Eastern robin, *Turdus migratorius migratorius* L.

*Type locality*.—Pass-a-Grille, Florida.

*Type slide*.—Cat. No. 50985, U. S. National Museum.

The holotype male and allotype female on the type slide were collected from the type host at the type locality on March 15, 1935, by W. G. Fargo (Bishopp number 22804). The paratypes are in the collections of the Bureau of Entomology and Plant Quarantine, British Museum of Natural History, and my personal collection.

Described from 71 specimens, all collected from the eastern robin, *Turdus migratorius migratorius* L., as follows: 4 females, Groveport, Ohio, March 3, 1928, by H. S. Peters (my personal collection); 2 females, Fort du Pont, Delaware, April 13, 1933, by H. S. Peters (Bishopp no. 20847); 1 male and 3 females, Groton, Massachusetts, June 26, 1934, by W. P. Wharton (Bishopp no. 22676); 5 males, 22 females, and 14 immature specimens, Pass-a-Grille, Florida, March 15, 1935, by W. G. Fargo (Bishopp no. 22804); 1 female and 3 immature specimens, Pisgah Forest, North Carolina, March 15, 1935, by E. E. Ripper (Bishopp no. 22823); and 2 males, 7 females, and 7 immature individuals, Rosslyn, Virginia, March 20, 1935, by H. S. Peters (Bishopp no. 22825).

All of the immature specimens observed, the smallest probably in the second instar, show the distinctive head shape and clypeal

signature. Specimens at hand from southern robin, *Turdus migratorius achrusterus* (Batchelder), western robin, *T. m. propinquus* Ridgway, and northwestern robin, *T. m. caurinus* (Grinnell), seem to be *P. subflavescens*, so possibly this new species is found only on the eastern robin.

*Degeeriella anhingae*, n. sp.

**MALE.**—*Head* as shown in figure 3, about two-thirds as broad as long. A distinct clypeal signature, somewhat hexagonal, but longer than wide. Trabeculae small, colorless, and about half as long as first antennal segment. Eye clear, slightly protruding, with a short dorsal seta. Temples rather straight but rounded toward posterior part of head, bearing 1 long seta and 5 bristles on each side. Antennae reaching, if extended backwards, between second and third bristle behind the eye. Second segment longest, fifth almost as long as first, third and fourth equal in length and each slightly longer than the first segment. Posterior edge of head slightly concave and bare of setae.

*Thorax.* Prothorax twice as wide as long, sides slightly diverging, a long seta and a bristle near each latero-posterior angle. A slight lateral indication of a suture between the mesothorax and the metathorax. Pterothorax trapezoidal in shape, sides slightly diverging. One long seta and a bristle in each posterior angle and a group of 5 long setae on each side of the posterior margin near the lateral margin. Posterior margin very slightly concave. Legs long, first pair shortest, third pair longest and reaching, if extended backwards, to center of fifth abdominal segment.

*Abdomen* of 9 segments, although the suture between the eighth and ninth segments is very indistinct, elongated, slightly wider at fourth segment than the head. First segment with no setae, second segment with 1 seta, third and fourth segments with 3, and segments 5, 6, and 7 with 4 setae in latero-posterior angle. Dorsal setae: 1 pair of long setae in center of posterior margin of segments 1 to 6; segment 5 with 2 long setae and segment 6 with 1 long seta on the posterior margin under the spiracles on each side; segment 8, which is somewhat spade-shaped, with 1 long seta on each side near latero-posterior margin. Ventral setae: 4 long setae on posterior edge of segments 1 to 7; eighth segment with 2 pairs of 2 long setae on each side, 1 pair posterior to the other pair; ninth segment with a patch of about 20 bristles near center of anterior part of segment. Genitalia distinctive, as shown in figure 4, occupying parts of segments 5 to 9. Pleurites projecting slightly into preceding segment. A peculiar reversed comma-like marking anterior to each spiracle on segments 2 to 7. Coloration: Light golden brown with darker brown borders and markings.

**FEMALE.**—Very similar to male but slightly larger. Antennae the same in the two sexes. Ninth abdominal segment slightly bilobed, with 2 short setae near tip of each lobe. Ventrally the seventh segment has an irregular double row of medium-length setae extending across the center of the segment; then a curving irregular double row of similar setae extends from each end of the center rows of the seventh segment to the latero-posterior margin of segment 8.

AVERAGE MEASUREMENTS IN MM.

	Male		Female	
	Length	Width	Length	Width
Head.....	0.49	0.37	0.51	0.41
Thorax.....	.27	.32	.28	.38
Abdomen.....	1.04	.38	1.14	.55
Total	1.80		1.93	

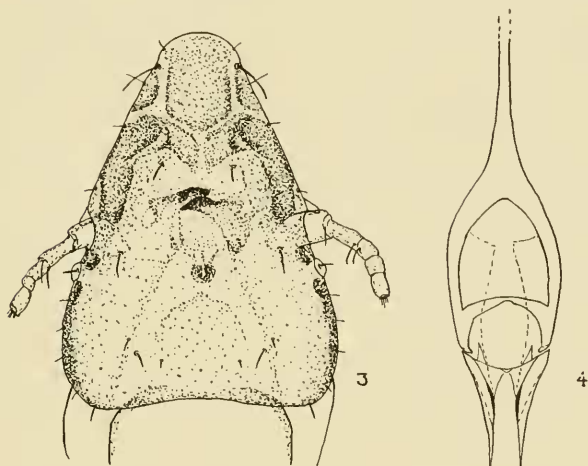


Fig. 3. *Degeeriella anhingae*, head of male, dorsal aspect,  $\times 100$ .  
 Fig. 4. Same, male genitalia, dorsal aspect,  $\times 200$ .

*Type host.*—Anhinga or water-turkey, *Anhinga anhingae* (L.).

*Type locality.*—Juno, Texas.

*Type slide.*—Cat. No. 50986, U. S. National Museum.

The holotype male and allotype female on the type slide together with 10 males, 11 females, and 4 immature specimens, were collected from the type host at the type locality on September 24, 1923, by O. G. Babcock (Bishopp number 11208). The paratypes are in the collections of the Bureau of Entomology and Plant Quarantine and the British Museum of Natural History.

This new species is easily recognized by the head characters, slender abdomen with the peculiar marks anterior to the spiracles, and the male genitalia.